

Title (en)  
Color-mixing light-emitting diode module

Title (de)  
Farbmischungs-Leuchtdiodenmodul

Title (fr)  
Module à diode électroluminescente de mélange de couleurs

Publication  
**EP 2927957 A3 20160210 (EN)**

Application  
**EP 14169173 A 20140520**

Priority  
TW 103108523 A 20140311

Abstract (en)  
[origin: EP2927957A2] The present invention provides a color-mixing light-emitting diode module. According to the present invention, a first light-emitting chip and two second light-emitting chips are disposed on a holder. The first light-emitting chip emits red light and the plurality of second light-emitting chips emit white light. The red light and the white light are mixed, giving mixed light with high color rendering and brightness. Objects illuminated by the mixed light will exhibit colors closest to their original colors as perceived by eyes. Furthermore, by arranging the first and second light-emitting chips in matrix, the color rendering of the light-emitting diode module can be adjusted and improved.

IPC 8 full level  
**H01L 25/075** (2006.01); **H01L 33/50** (2010.01); **H01L 33/58** (2010.01)

CPC (source: EP US)  
**F21K 9/62** (2016.07 - EP US); **H01L 25/0753** (2013.01 - EP US); **F21Y 2113/17** (2016.07 - EP US); **F21Y 2115/10** (2016.07 - EP US); **H01L 33/504** (2013.01 - EP US); **H01L 33/58** (2013.01 - EP US); **H01L 2224/48091** (2013.01 - EP US); **H01L 2924/15192** (2013.01 - EP US); **H01L 2924/181** (2013.01 - EP US)

Citation (search report)

- [Y] US 2003067773 A1 20030410 - MARSHALL THOMAS M [US], et al
- [Y] US 2011215349 A1 20110908 - AN JOONG IN [KR], et al
- [Y] US 2012286301 A1 20121115 - KOBAYAKAWA MASAHIKO [JP], et al
- [Y] US 2004217364 A1 20041104 - TARSA ERIC JOSEPH [US], et al
- [Y] EP 2398051 A2 20111221 - INTEMATIX TECHNOLOGY CT CORP [TW]
- [Y] US 2007284994 A1 20071213 - MORIMOTO TAJI [JP], et al

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 2927957 A2 20151007**; **EP 2927957 A3 20160210**; **EP 2927957 B1 20181121**; TW 201535796 A 20150916; TW I559578 B 20161121; US 2015260357 A1 20150917; US 9341322 B2 20160517

DOCDB simple family (application)  
**EP 14169173 A 20140520**; TW 103108523 A 20140311; US 201414273712 A 20140509